

In the claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1-10. (canceled).

11. (currently amended) The automated method of claim [[10]] 19 wherein the preferred gain of the cells is determined using a continuous buffering assumption.

12. (currently amended) The automated method of claim [[2]] 19 wherein said initial delay values are determined during library analysis.

13-18. (canceled)

19. (new) An automated method for designing an integrated circuit layout with a computer, comprising:

selecting cells from a cell library to implement a circuit path;

prior to placement of the circuit path, determining initial delay values for the selected cells based on corresponding preferred gains of the selected cells;

prior to placement of the circuit path, determining an adjusted initial delay value for at least one of the selected cells by performing at least one of:

compressing the initial delay value of at least one of the selected cells to meet delay constraints for the circuit path, and

stretching the initial delay value of at least one of the selected cells to reduce slack in the circuit path;

performing a placement of the selected cells for the circuit path, including assigning wire loads to the selected cells;

adjusting size or area of one or more of the selected cells during or after placement in response to the assigned wire loads, to maintain the initial delay value or the adjusted initial delay value for the corresponding selected cells; and

routing the selected cells for the circuit path.

1           20. (new) The automated method of claim 19, including prior to placement, inserting a  
2   buffer in the circuit path when there is available slack in the circuit path.

1           21. (new) The automated method of claim 20, including prior to placement, determining  
2   net weight values for the selected cells, the net weight values representing sensitivity of total area  
3   of a circuit design to load on the corresponding cell, and determining whether to insert a buffer  
4   on the output of a given cell in the selected cells using the net weight value of the given cell.

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